Tektronix Logic Analyzers

This product is discontinued.
View alternative products.

Check product support status.

Product Information

- Introduction

Characteristics/Specs

TLA700 Series Mainframes

Features & Benefits

- Modular Mainframes Provide Flexibility and Expandability
- Utilize Logic Analyzer or Pattern Generator Modules
- Expansion Mainframe Supports Up to 8160 Logic Analyzer Channels, 60 Independent Buses
- All Measurement Modules are Fully Interchangeable Between Portable and Benchtop Mainframes
- Integrated View (iView™) Capability Provides up to 6 GHz, 20 GS/s, and 32 Mb Analog Acquisition with a Stand-alone Tektronix TDS Digital Storage Oscilloscope
- Microsoft® Windows® 2000 Professional PC Platform Provides Familiar User Interface With Network Connectivity
- View Data in Waveform, Listing, Source Code, Histogram (Performance Analysis) Displays to Perform Cross-domain Analysis
- Remote Control Using Microsoft® COM/DCOM Technology Supports Advanced Data Analysis
- Broad Processor and Bus Support
- TLAVu and PatGenVu Off-line Analysis Capability for Viewing Data and Creating Setups on a Separate PC

Applications

- Hardware Debug and Verification
- Processor/Bus Debug and Verification
- Embedded Software Integration, Debug and Verification

Breakthrough Solutions for Real-time Digital Systems Analysis

The TLA715 and TLA721 mainframes are modular mainframes that accept TLA7Axx and TLA7Lx/Mx/Nx/Px/Qx logic analyzer modules, as well as TLA7PG2 pattern generator modules. The TLA715 and TLA721 can be used in conjunction with a TLA7XM expansion mainframe to provide solutions for large numbers of buses and high channel count requirements.

The TLA715 and TLA721 mainframes are built on a Microsoft® Windows® 2000 Professional PC platform that offers a familiar work environment. TLA applications operate like any other PC application.

The TLA715 and TLA721 mainframes come standard with dual display capability for extended desktop viewing, in addition to an internal CD-RW, hard disk and PC card slots for expansion. A replaceable hard disk is standard on both mainframes, ideal for security or enabling individual team members to store personal setups and data. Trigger in/out connections provide an interface to other external instrumentation, such as TDS oscilloscopes, for correlating measurement results.

CE

ISO 9001 Product(s) are manufactured in ISO registered facilities.

52W-18873-0a, 16-AUG-2005
(WebID: 13442)

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Tektronix Logic Analyzers

TLA700 Series Mainframes

Characteristics

General (TLA715, TLA721, TLA7XM)

Instrument Slots - TLA715: Holds 4 single-wide or 2 double-wide modules.

TLA721: Holds 10 single-wide or 5 double-wide modules.

TLA7XM: Holds 12 single-wide or 6 double-wide modules.

Quantity of TLA7XMs - The TLA700 Series Mainframes can support multiple TLA7XM mainframes.

TLA715: Up to two TLA7XM mainframes can be used providing 13 dual/26 single instrument slots*2 *3.

TLA721: Up to ten TLA7XM mainframes can be used providing 60 dual/120 single instrument slots*2 *3.

Mainframe	LA*1	PG*1
Max channels per module	136 ch.	64 ch.
TLA715	1,768	832
TLA721	8,160	3,840

*1 All logic analyzer (LA) and pattern generator (PG) modules are dual-wide or occupy two single-wide slots.

*2 TLA7XM Expansion Module occupies one single-wide slot in both the TLA715/TLA721 mainframes and the TLA7XM expansion mainframe.

*3 Using a TLA7XM expansion mainframe with an existing TLA714/TLA720 mainframe requires Version 4.0 or higher TLA application software. TLA720 benchtop mainframes, S/N: B019999 and lower, require TLA7UP Option 09 TLA720 Benchtop Mainframe Upgrade. Please refer to the TLA Upgrade Guide for further details.

Example of TLA721 with ten TLA7XM Mainframes.

For configurations beyond ten TLA7XM expansion mainframes, please contact your local Tektronix account manager.

TLA700 PC Characteristics (TLA715 and TLA721)

Operating System - Microsoft Windows 2000 Professional.

Processor - Intel Pentium III.

Chipset - Intel 815E.

DRAM - 512 MB SDRAM.

Display Memory - 4 MB.

Dual Monitor Support - 1600 x 1200 Resolution.

Sound - Built-in PC speaker transducer; multimedia sound can be added via PC Card interface.

Replaceable Hard Disk Drive - TLA715: 40 GB.

TLA721: 40 GB.

CD ROM - Internal 8/4/32 CD-RW.

Floppy Disk Drive - Built-in 3.5 in. 1.44 MB drive.

TLA700 Integral Controls (TLA715 only)

Front-Panel Display - Size: 10.4 in. diagonal.

Type: Active-matrix color TFT LCD with backlight.

Resolution: 800 x 600.

Colors: 16.8 M (true color).

Simultaneous Display Capability - Both the front-panel and one external display can be used simultaneously at 800 x 600 resolution.

Front-panel Knobs - Special function knobs for instrument control.

Front-panel QWERTY Keypad - Mini-QWERTY keypad and Hex keypad.

Front-panel Pointing Device - Trackball.

TLA700 External Peripheral Interfaces (TLA715 and TLA721)

External Display Port Type - (2) Female DB15 connectors.

External Display Resolution - Up to 1600 x 1200 non-interlaced at 256 colors, for both primary and secondary displays.

External Display Compatibility - DDC2B (dynamic display configuration 2).

External Keyboard Port Type - PS2 mini-DIN.

External Mouse Port Type - PS2 mini-DIN.

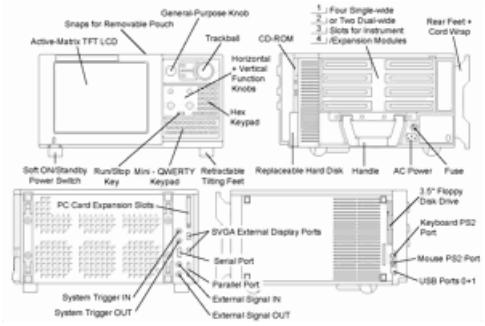
Parallel Interface Port Type - IEEE 1284-C connector (comes standard with adapter to female DB25 connector).

Parallel Interface Modes - Centronics mode, EPP (Extended Parallel Port), ECP (Microsoft high-speed mode).

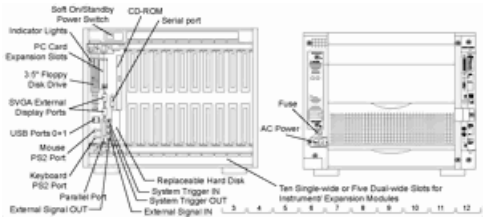
Serial Interface Port Type - Male DB9.

PC Card (CardBus) Slot Types - Two slots, two PC Card Type I/II or one PC Card Type III.

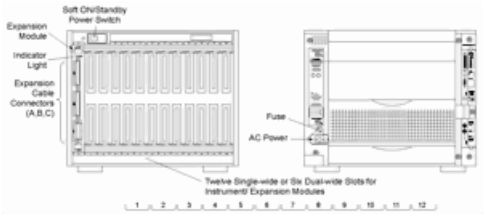
USB Port - Two (2).



TLA715 Portable Mainframe.



TLA721 Benchtop Mainframe.



TLA7XM Expansion Mainframe.

Integrated View (iView™) Capability

TLA mainframe configuration requirements - TLA714/720/715/721 Series mainframes, TLA520x instruments, and TLA6XX instruments.

TLA App S/W V 4.1 or greater.

256 MB DRAM Minimum, 512 MB recommended.

TDS configuration requirements - The iView™ cable does not fully connect to the TDS1000/2000 Series oscilloscopes without a GPIB extender. Tektronix recommends a standard GPIB cable as an extender, or order a cable extender (National Instruments part number 181638-1). TDS2CMAX Communications Extension Module is required for iView capability on any TDS1000/2000 Series. TDS3GM GPIB/RS232 Interface Module required for iView capability on any TDS3000 series. TDS3GV GPIB/RS232/VGA Interface Module required for iView capability on any TDS3000B series. If using TLA7Axx iConnect with a TDS6404, TDS6604, TDS7154, TDS7404, CSA7154 or CSA7404 oscilloscope, four TCA-BNC connectors are required to be compatible with BNC cables from the TLA7Axx module.

Number of TDS oscilloscopes that can be connected to a TLA system - 1.

External Oscilloscopes Supported - TDS1002, TDS1012, TDS2002, TDS2012, TDS2014, TDS2022, TDS2024.

TDS3012, TDS3014, TDS3032, TDS3034, TDS3052, TDS3054.

TDS3012B, TDS3014B, TDS3032B, TDS3034B, TDS3052B, TDS3054B.

TDS5032, TDS5034, TDS5052, TDS5054, TDS5104.

TDS6404, TDS6604.

TDS7054, TDS7104, TDS7154, TDS7404.

TDS684C, TDS694C.

CSA7154, CSA7404.

TDS754C, TDS784C, TDS724D, TDS754D, TDS784D, TDS794D.

TLA Connections - USB, Trigger In, Trigger Out, Clock Out.

TDS Connections - GPIB, Trigger In, Trigger Out, Clock In (when available).

Setup - iView™ external oscilloscope wizard automates setup.

Data Correlation - After TDS oscilloscope acquisition is complete, the data is automatically transferred to the TLA and time correlated with the TLA acquisition data.

Deskew - TDS and TLA data is automatically deskewed and time correlated when using the iView™ external oscilloscope cable.

iView™ External Oscilloscope Cable Length - 2 m.

TLA715 Series with TDS7000 Series oscilloscope.

Symbolic Support

Number of Symbols/Ranges - Unlimited (limited only by amount of virtual memory available on TLA).

Object File Formats Supported -

- IEEE695
- OMF 51, OMF 86, OMF 166, OMF 286, OMF 386
- COFF
- Elf/Dwarf 1 and 2
- Elf/Stabs
- TSF (if your software development tools do not generate output in one of the above formats, TSF or the Tektronix symbol file, a generic ASCII file format is supported. The generic ASCII file format is documented in the TLA User Manual). If a format is not listed, please contact your local Tektronix representative.

External Instrumentation Interfaces

System Trigger Output - Asserted whenever a system trigger occurs (TTL-compatible output, back-terminated into 50 Ω).

System Trigger Input - Forces a system trigger (triggers all modules) when asserted (TTL-compatible, edge-sensitive, falling-edge latched).

External Signal Output - Can be used to drive external circuitry from a module's trigger mechanism (TTL-compatible output, back-terminated into 50 Ω).

External Signal Input - Can be used to provide an external signal to arm or trigger any or all modules (TTL-compatible, level-sensitive).

P6041 External Signal Cable Length - (SMB to BNC adapter cable, two each TLA721 only) 1.1 m (42 in.).

Power

TLA715 - Voltage range/frequency: 90-250 VAC at 45-66 Hz.

100-132 VAC at 360-440 Hz.

Input current: 6 A maximum at 90 VAC (70 A surge).

Power consumption: 600 W maximum.

TLA721 and TLA7XM - Voltage range/frequency: 90-250 VAC at 45-66 Hz, 100-132 VAC at 360-440 Hz.

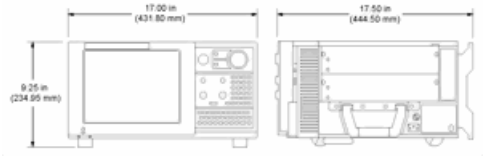
Input current: 16.5 A maximum at 90 VAC (70 A surge).

Power consumption: 1,450 W maximum.

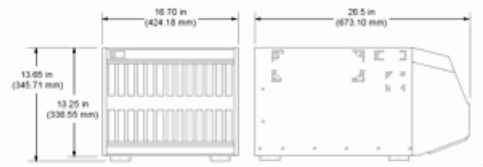
Physical Characteristics

TLA715 Portable		
Dimensions	mm	in.
Weight	kg	lb.

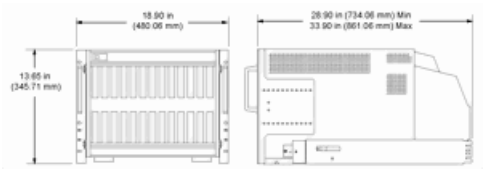
TLA721 Benchtop & TLA7XM Expansion		
Dimensions	mm	in.
Weight	kg	lb.
Height	235	9.25
Width	432	17
Depth	455	17.5
Net (w/o modules)	11.4	25
Shipping (typical)	25.5	56
Height	346	13.65
Width	425	16.7
Depth	673	26.5
Net (w/o modules)	22.7	50
Shipping (typical)	51.8	114



TLA715 Portable Mainframe.



TLA721 and TLA7XM Benchtop and Expansion Mainframes.



TLA721 and TLA7XM Benchtop and Expansion Mainframes with TLA721/TLA7XM Rackmount Kit.

Environmental

Temperature - Operating: +5 °C to +50 °C.

Nonoperating: -20 °C to +60 °C.

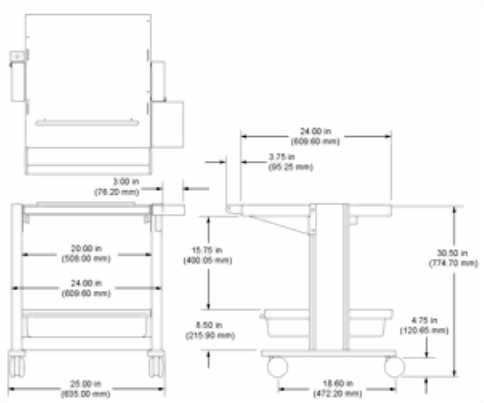
Humidity - 20% to 80%.

Operating: ≤30 °C; 80% relative humidity (29 °C maximum wet bulb temperature).

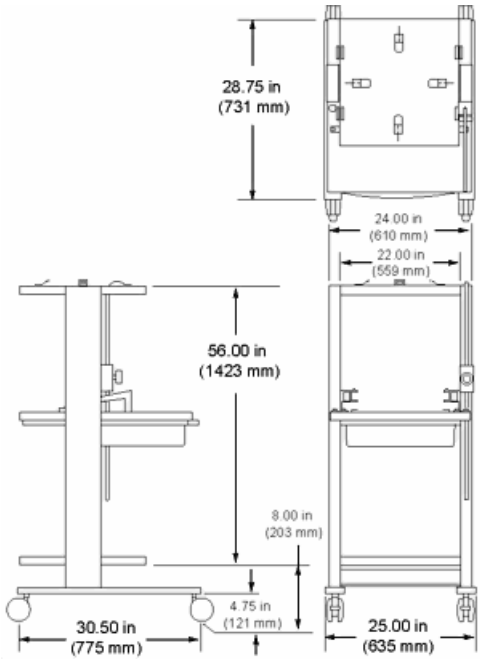
Nonoperating: 8% to 80% (29 °C maximum wet bulb temperature).

Altitude - Operating: -1,000 ft. to 10,000 ft. (-305 meters to 3,050 meters).

Safety - UL3111-1, CSA1010.1, EN61010-1, IEC61010-1.



LACART Instrument Cart (adjustable probe skyhook not shown).



K4000 Instrument Cart.

CE

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